HELLO
MY NAME IS
FUN
CENTER

Starlight Children's Foundation℠

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MEMORANDUM

TO: Hospital Fun Center Contact

FROM: Heather Klingsporn - Starlight Children's Foundation,
Jon Pederson - Nintendo of America

DATE: February 16, 1998

RE: Modifications to Starlight Fun Centers

****

Starlight Children's Foundation has authorized Retail Representatives from Nintendo of America, Inc. to perform work on the Starlight Fun Centers. Retail Representatives will be reviewing previous enhancements and upgrades performed as well as the overall functioning of Fun Centers.

If any of the hospital's Fun Centers need repair and maintenance, and the hospital would like Starlight's assistance, please contact Starlight Children's Foundation at (800) 274-7827, extension 194.

If any questions arise, please contact Starlight Children's Foundation at (800) 274-7827, extension 194.

Thank you for your assistance.

heather/word/functrs/techauth.doc

INTERNATIONAL HEADQUARTERS • 12424 Wilshire Boulevard, Suite 1050 • Los Angeles, California 90025
phone (310) 207-5558 • fax (310) 207-2554 • www.starlight.org

Nintendo of America Inc.
4820 150th Avenue N.E.
Redmond, WA 98052 U.S.A.

425-882-2040
Fax 425-882-3585

To All NMI Retail Representatives:

Enclosed you will find all of the anticipated materials needed to perform the Fun Center inspection and update. The purpose of your inspection and update is to:

① Complete a thorough inventory of units in the field by version and system type
② Ensure that the previous safety enhancement was done properly and to perform any enhancements not yet completed
③ Perform necessary repairs to maximize the number of operational units in the field
④ Record any future repairs that are required

Upon receipt of this kit, familiarize yourself with all of the enclosed materials:

Instruction Video

Provides an overview of Fun Center assembly/disassembly required to inspect the previous enhancement work.

Fun Center Repair Manual

To be used when the Fun Center is not operational and requires repair. Exploded view drawings, wiring diagrams, parts lists and assembly/disassembly instructions are provided.

Fun Center Enhancement and Upgrade Guide

This was previously used to perform the enhancements to the Fun Center and in some cases upgrades to the N64 System. Not all of the Fun Centers were upgraded to N64 but all should have safety enhancements. Refer to the enhancement guide for specific instructions on enhancement steps if they have not yet been completed.

NMI Fun Center Work Check Sheets

These provide the following:

① A method for data collection by Fun Center location, serial number, system type and version
② Step-by-step instructions for the inspection
③ Enhancement steps (if not already completed or incorrectly completed.)
④ A means to schedule further work if required
⑤ A means to order needed parts

Fun Center Master Key

To be used if you find any locked units. Please be sure to leave these units UNLOCKED when you're done. Many, if not most of the hospitals have lost all of the keys and thus leave units unlocked. If locked, they'll be non-operational and it will require another visit.

Starlight 800# Stickers

To be placed on each Fun Center next to the serial number. Starlight provides "800" line Fun Center troubleshooting assistance to HOSPITALS. DOTS is also more than happy to provide NMI RETAIL REPS. with troubleshooting assistance.

Hospital Inventory/Address/Contact Sheets

These sheets provide your expected inventories at each hospital, the address, contact name and phone number for each hospital. Be sure to contact hospitals 24-48 hours in advance to schedule your visit. Your contacts at these hospitals have other primary duties and may not be able to accommodate you on your desired day.

Starlight Introduction Letter

Present this letter if anyone questions whether you have been authorized by Starlight to service these units.

Remaining Parts and Components

The remaining items in your kit will be used to replace any missing items from the previous enhancement work and for any non-functioning items. If N64 controllers are required, please use components from your store call stock. Call DOTS if you have any questions about the use of these parts, or if you require more parts than provided.

To make your visits as smooth as possible, follow these steps:

① Contact hospitals 24-48 hours in advance to schedule your visit. Introduce yourself as the Nintendo Retail Representative assigned to the task of reviewing previous enhancements and checking overall function of the Fun Centers in their hospital. Ask where you should meet your contact.

NOTE: If after the inspection you're asked whether you'll be back again to check the Fun Centers, say that you're not currently scheduled to do so, but if they have any questions they can call the Starlight 800# shown on the sticker on the side of the unit.

② Completely review the documentation and video prior to your visit.

③ Review your parts inventory to ensure required parts are available.

④ Use the "NMI Fun Center Work Check Sheets" for each unit review. Be sure to record any future work required and fill out **ALL** sections of this sheet.

⑤ Be sure to test each unit after reassembly to ensure proper operation. **DO NOT** lock if unit was unlocked when you arrived.

⑥ Check your hospital inventory sheets to ensure that you inspect all units.

⑦ Ensure that all components are secured to reduce the possibility of theft.

⑧ Return check sheets to the NMI corporate office.

Be sure to bring the following items with you:

Tools	Fun Center Repair Manual
Cleaning supplies	Fun Center Enhancement Guide
Ink pen	Fun Center work check sheets
A 1/2" video tape (to test the VCR)	Laminated Starlight letter
N64 replacement controllers	All other items in Fun Center kit

NOTE: It's important for your safety that you unplug the Fun Center before removing any component or before opening the switch box.

Finally, do not be alarmed by the physical condition of these units. Many of them have performed years of service. Doors may be missing and graphics stickers torn and tattered. While this does not present the best visual appeal, our #1 goal is to provide as many operational units as we can. This maximizes game play opportunities for the children. Record any cosmetic issues you would like addressed in the future and be sure to clean the unit before you leave.

Thank you all in advance for your support in this effort. Your work on this project has a direct impact on the quality of a child's experience at these hospitals.

Jon Pedersen, Director
Technical Services

Attachment

JP:sj

NMI Fun Center Work Check Sheet

Serial # _____ Location _____ Date _____

Address _____ City _____ State _____ Zip _____

Contact name _____ Appointment time/date _____

Inspected by _____ NMI # _____
(please print)

Power switch type:	On Drawer		On Side By Power Cord
	Black	Red	
	☐	☐	☐
Type:	C	A	B

System Type
NES SNES N64
☐ ☐ ☐
VCR type _____

Tip Bumpers
Yes No
☐ ☐

The following steps are from the *Starlight Fun Center Enhancement and Upgrade Guide*.

1. Check overall operation of the Fun Center

		Yes	No	Repaired
a.	TV working	☐	☐	☐
b.	Game system operation with all game paks and both controllers	☐	☐	☐
c.	VCR operation with one tape	☐	☐	☐
d.	Power switch operation	☐	☐	☐
e.	VCR/game switch operations	☐	☐	☐

Comments/repairs performed _____
_____
_____

2. Check for proper labeling

		Yes	No	Added
a.	Power cord label (step 18); add if missing	☐	☐	☐

		Yes	No	Added
b.	Serial number affixed (step 17); add if missing	☐	☐	☐

Comments _____
_____
_____

Important: Turn off the Fun Center and disconnect from outlet before performing any of the following steps.

3. Remove N64 Control Deck

		Good	Marred
a.	Check condition of nuts (step 16); replace if in poor condition	☐	☐

		Yes	No
b.	Check proper routing of controller wires (step 16); re-route if required.	☐	☐

Comments/repairs performed _____
_____
_____

4. Replace game paks if missing

a. Quantity of missing game paks: _____

b. Label game paks with hospital's name (indelible ink.)
Game pak titles 1. _____ 2. _____ 3. _____

Skip this step if power switch is Type B:

5. Remove VCR, open silver switch box (steps 3-5)

		Yes	No
a.	VCR connections done; if not, reconnect after completion	☐	☐

Comments/repairs performed _____
_____
_____

Skip this step if power switch is Type B:

6. Steps 6 through 8 provide instructions on how to replace the connectors and add the tie-down.

Check the following:

		Yes	No	Added/Repaired
a.	Insulated connectors installed; install if not in place	☐	☐	☐
b.	Wire inserted into connectors so that no metal parts are exposed; reconnect if required	☐	☐	☐
c.	Connector cover closed properly; if not, close	☐	☐	☐
d.	Cable tie platform adhered to metal box in location shown and properly tied to wires to prevent disconnection from switch. Add if missing	☐	☐	☐

Comments _____
_____
_____

7. Check whether donor's name is legible. **Yes** ☐ **No** ☐

Comments _____
_____
_____

8. Reassemble unit and re-test for proper operation **Yes** ☐ **No** ☐ **Added/Repaired** ☐

Comments/repairs performed _____
_____
_____

		Yes	No
9.	**Add Starlight 800# sticker next to serial # label.**	☐	☐
10.	**Take picture of Fun Center**	☐	☐

11. Non-conversion issues to be addressed in the future/parts needed

a. _____

b. _____

c. _____

d. _____

e. _____

f. _____

12. Return this check sheet to:

Nintendo of America
Attn: Barb Kelly-Ruff
4820 - 150th Avenue N.E.
Redmond, WA 98052

11. Non-conversion issues to be addressed in the future/parts needed

a. _____

b. _____

c. _____

d. _____

e. _____

f. _____

12. Return this check sheet to:

Nintendo of America
Attn: Barb Kelly-Ruff
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Redmond, WA 98052

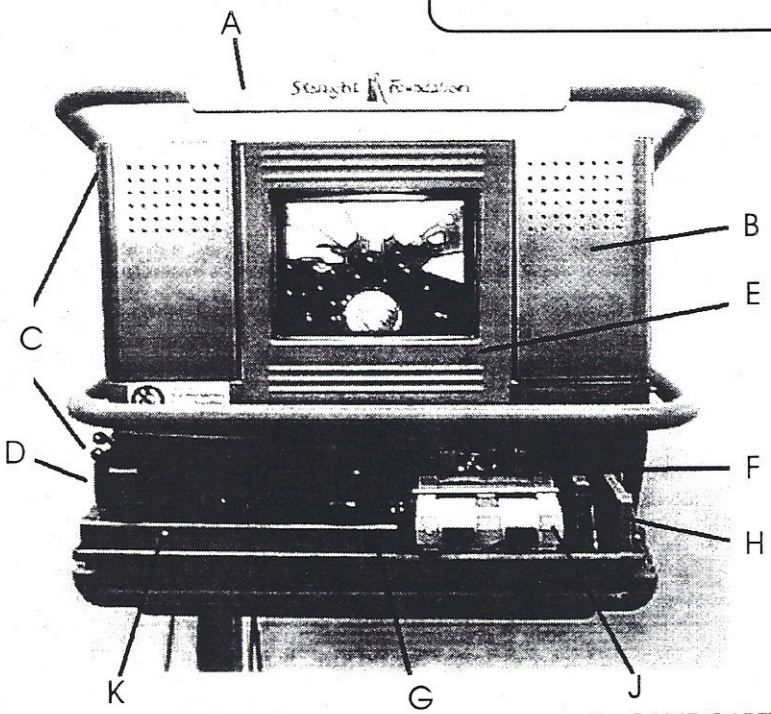
STARLIGHT FUN CENTER

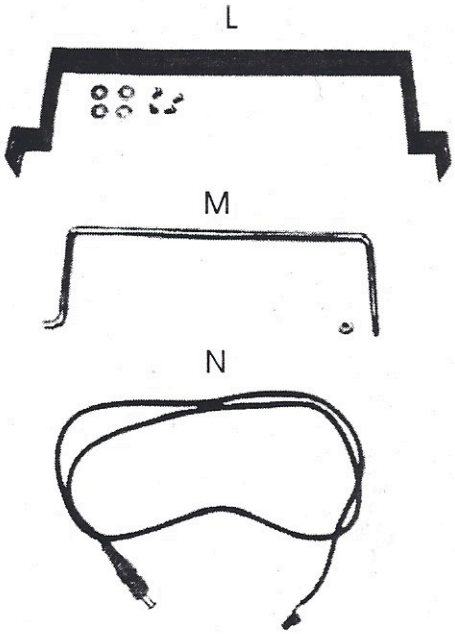
ENHANCEMENT and UPGRADE GUIDE

TOOLS YOU WILL NEED FOR THE ENHANCEMENT AND UPGRADE OPERATION:

- ••ADJUSTABLE PLIERS
- •NEEDLE NOSE PLIERS
- •"STUBBY" PHILLIPS SCREWDRIVER
- •SIDE OR WIRE CUTTERS
- •1/8" ALLEN WRENCH (SUPPLIED)

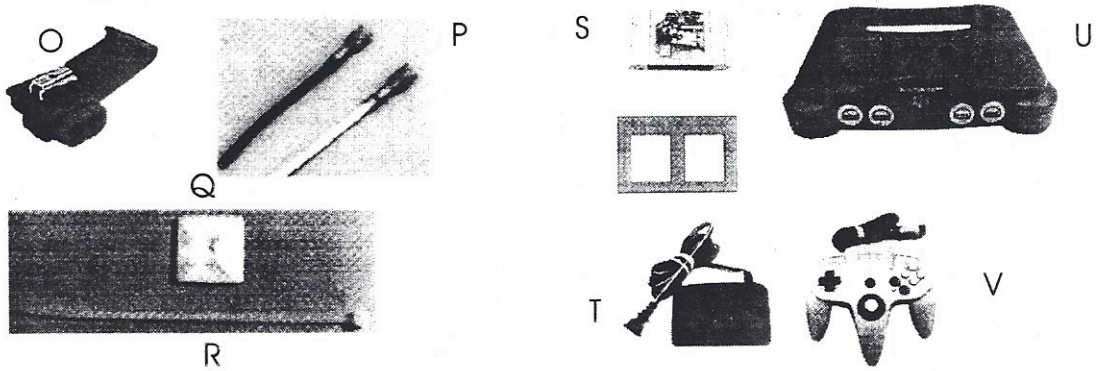
FUN CENTER PARTS





A - HEADER
B - SPEAKER ACCESS DOORS (2)
C - DOOR LOCKS (2)
D - VCR
E - MONITOR SHROUD
F - GAME CARTRIDGE HOLDER
G - POWER SWITCH
H - GAME CARTRIDGES
J - SUPER NINTENDO GAME DECK
K - VCR/GAME SELECTOR SWITCH
L - VCR SECURITY STRAP
M - NINTENDO OR SUPER NINTENDO SECURITY STRAP
N - MODIFIED POWER CABLE

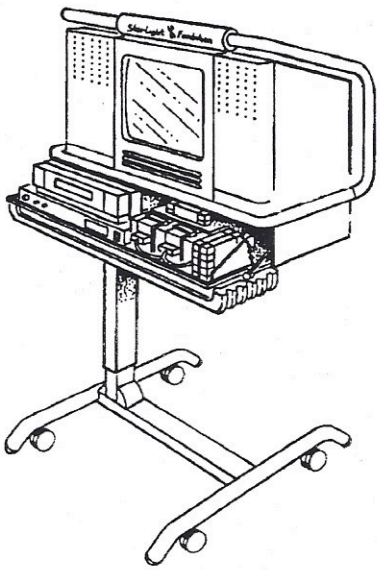
ENHANCEMENT AND UPGRADE PARTS



O - SELF STRIPPING WIRE CONNECTORS (4)
P - WIRE LEADS (2 BLACK; 2 WHITE)
Q - CABLE TIE PLATFORM
R - CABLE TIE
S - NINTENDO "N 64" GAME CARTRIDGES
T - NINTENDO "N 64" POWER SUPPLY
U - NINTENDO "N 64" GAME DECK
V - NINTENDO "N 64" CONTROLLERS (2)

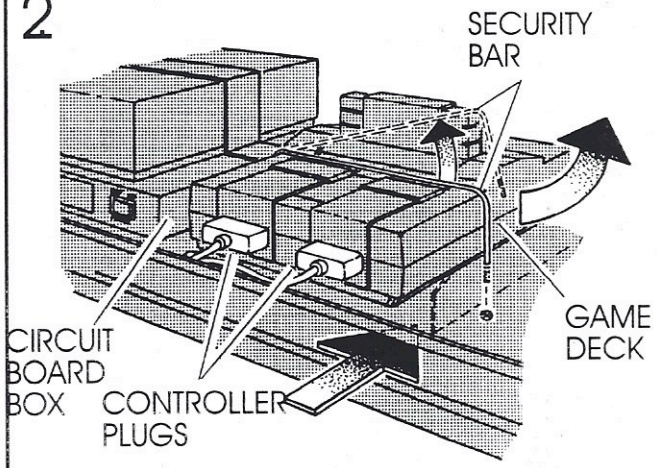
IMPORTANT:
UNPLUG THE MAIN POWER CORD (LEFT SIDE OF FUN CENTER) BEFORE PERFORMING THESE PROCEDURES!

1.



Turn off Fun Center and remove power cord electrical outlet. Open bottom section and pull out inner drawer to position shown.

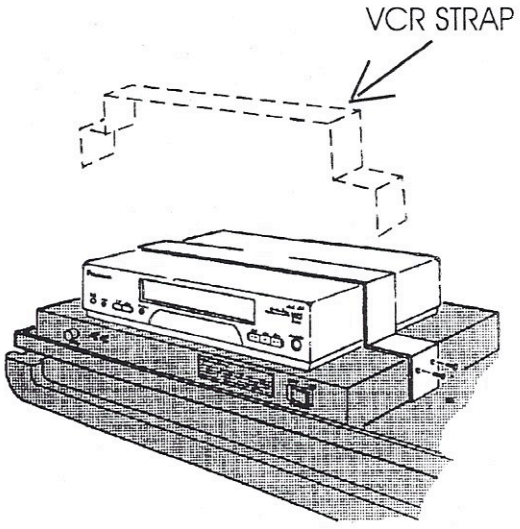
2



Using your pliers, remove nut from the bottom right side of the SECURITY BAR. Lift the bar up and off.

Unplug the CONTROLLER PLUGS fromthe front of the NINTENDO GAME DECK. Unplug rear plugs and remove.

3



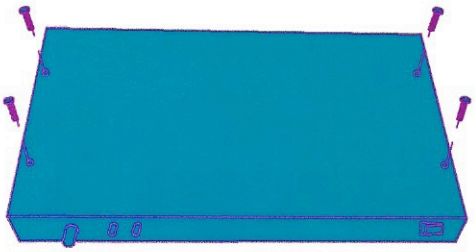
Remove 4 - screws holding the VCR Strap. Remove strap and set aside.

4

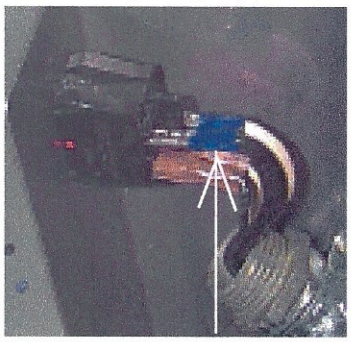
Unplug audio and video cables from back of VCR. Remove VCR, and place it on a chair or table to the right of the Fun Center. **Note: the power cord stays attached to the Fun Center.**

5.

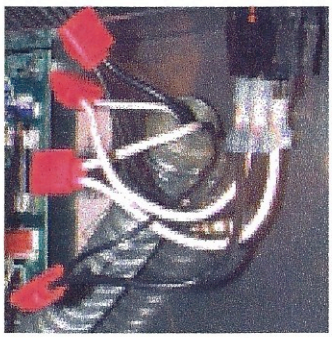
Remove 4 screws holding the circuit board cover in place. Lift up on the front of the circuit board cover.



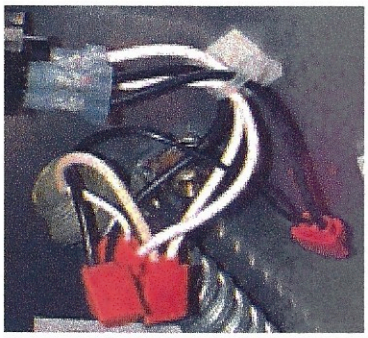
6. Check the following images before proceeding:



If there are any uninsulated connectors and no zip-tie holding the wires, go to **step 7.**



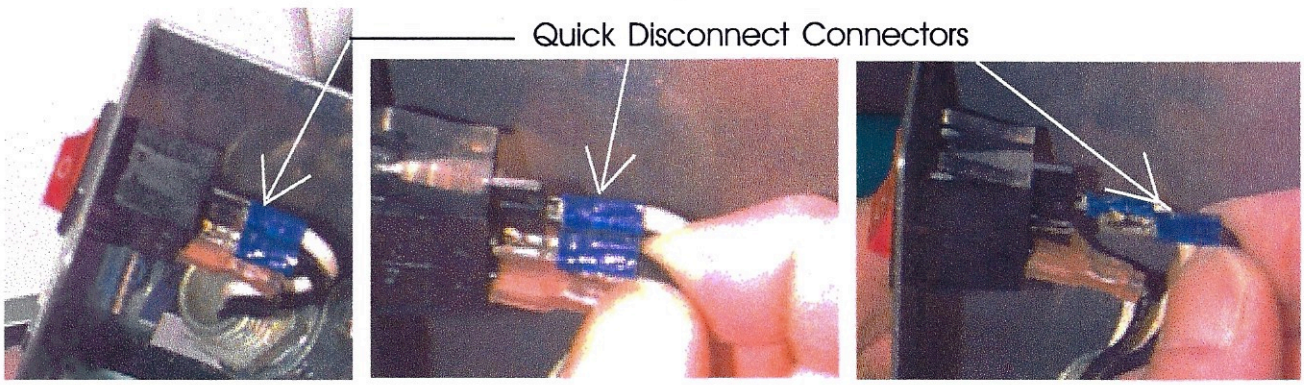
If there is no zip-tie holding the wiring in place, but the connectors are insulated, go to **step 8.**



If the connectors are insulated and the wires have the zip-tie strain relief, go to **step 9.**

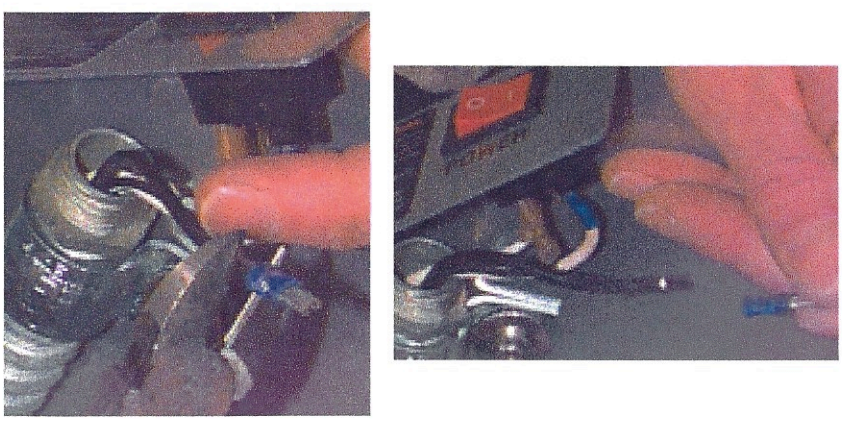
7. (REQUIRED FOR RED POWER SWITCH TYPE ONLY)

WARNING: BE SURE THE FUN CENTER IS UNPLUGGED BEFORE PROCEEDING!

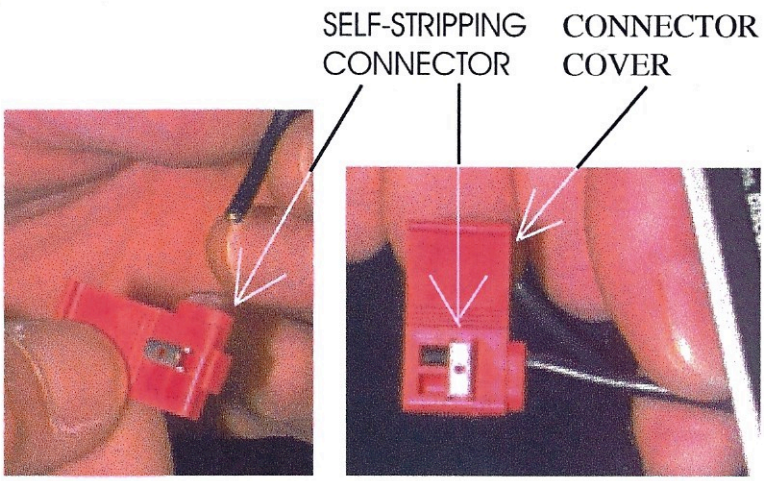


•Carefully unplug **one** of the quick disconnect connectors going into the power switch (see above). **Complete all of the following steps before removing another wire from the power switch.**

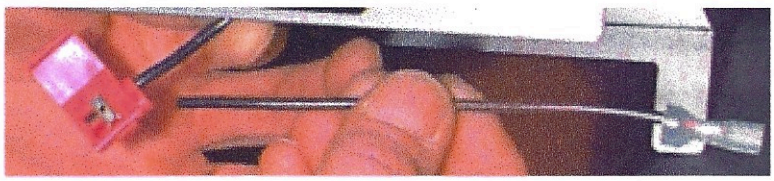
•Snip off the plastic connector as close to the end as possible, and discard connector.



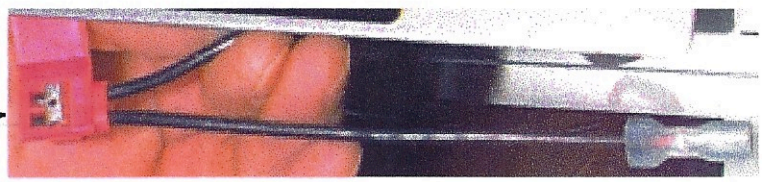
•Insert end of snipped wire into one hole of "Self Stripping" Connector.

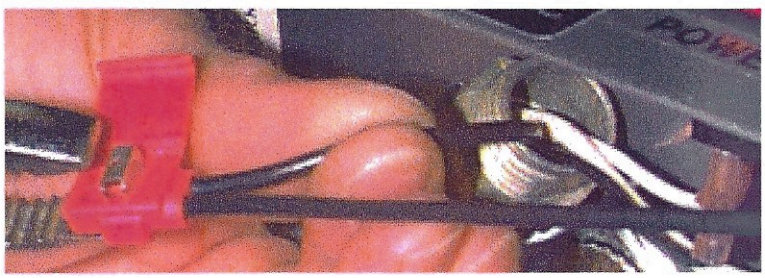


•Next, insert a matching color 4" wire lead into the other hole of "Self Stripping" Connector.



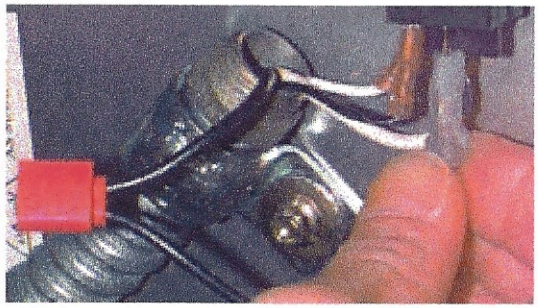
•Always push wire ends into self stripping connectors as far as they will go (**see example at right**.)





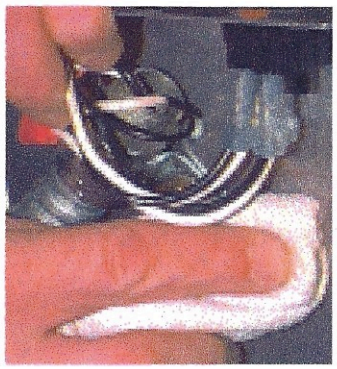
•With both wires inserted and correctly seated in the self stripping connector, grip connector with pliers as shown in view above and below.

•Squeeze connector so metal plunger goes down and is flush with the plastic (see below left.) Close cover and snap to insure proper locking. Connect the wire back to the switch terminal from which it was removed. **REPEAT PROCEDURES 6 & 7 FOR THE REMAINING SWITCH WIRES.**



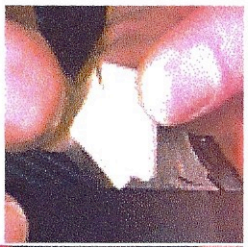
8. (REQUIRED FOR ALL POWER SWITCHS ON THE SILVER BOX)

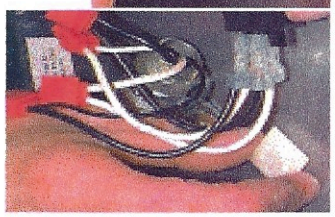
•Before applying the Cable Tie Platform, clean the painted surface with windex and allow to dry.



A.

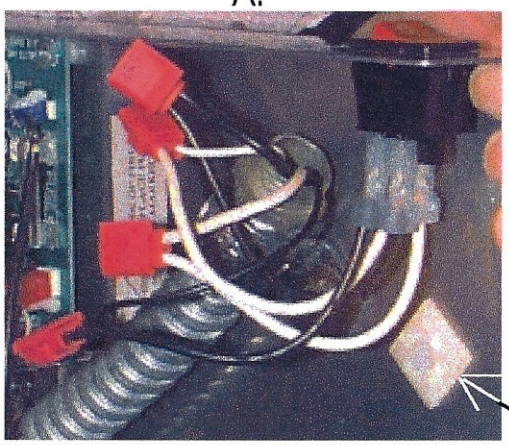
•Remove protective paper from adhesive on bottom of cable tie platform, and press in place as shown at right.

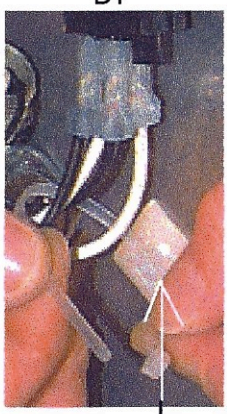


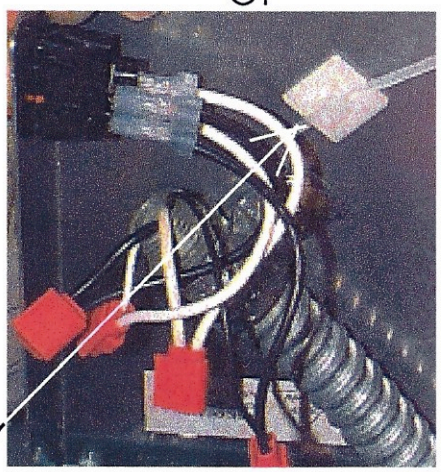


B.

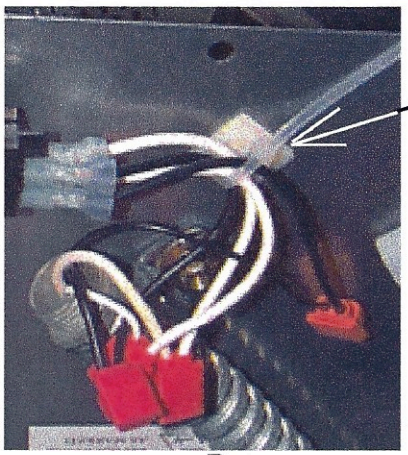
C.





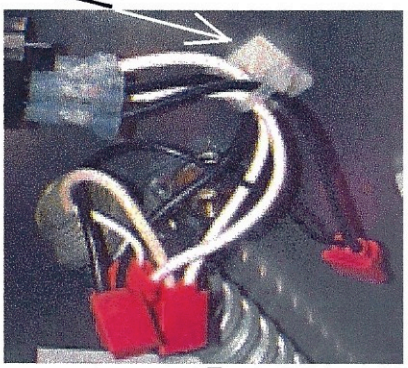


CABLE TIE PLATFORM

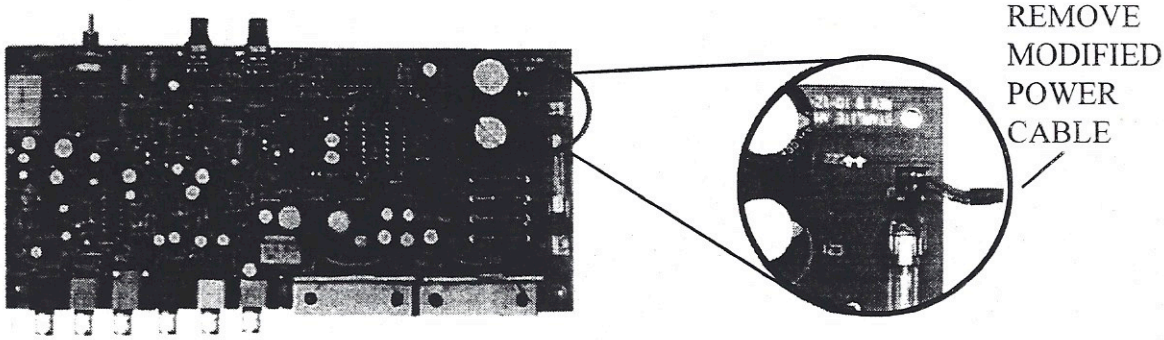


D.

•Secure the four wires (or two) with a cable tie. Pull tie up through loop in Cable Tie Platform, and snugly around wires. Check all other connectors and see that they are securely fastened to the circuit board.



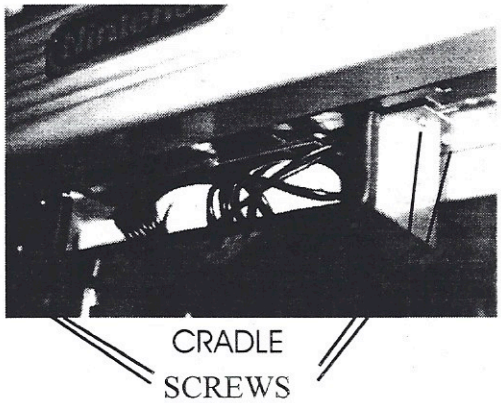
E.



Remove the Modified Power Cable from the circuit board. The other end of this power cable is connected to the back of the Nintendo Game Deck. Replace the circuit board cover and fasten with the 4 original sheet metal screws.

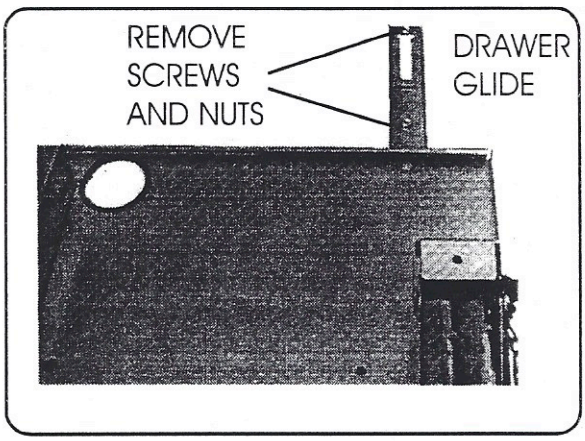
10.

Remove 4 - screws holding the Controller Cradle.
Set cradle and screws aside.



11.

Slide out the metal shelf and remove 2 - nuts and bolts which hold the right side drawer glide to the cabinet. See figure at right.

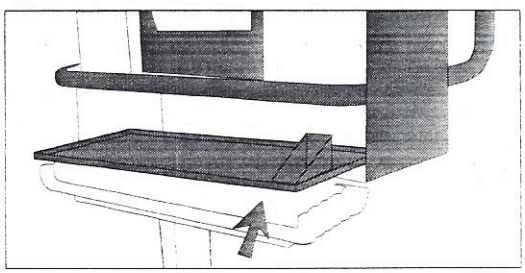


12.

With pliers, pull firmly to remove 2 - black plastic controller wire holders attached to the underside of the Fun Center.

Lift and prop up the right side on the metal shelf. Remove the two controllers from the Fun Center.

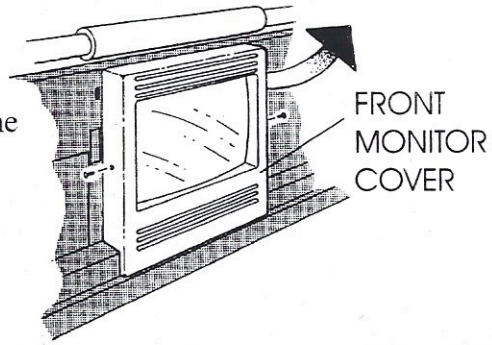
Replace the drawer glide and controller cradle to their original positions.



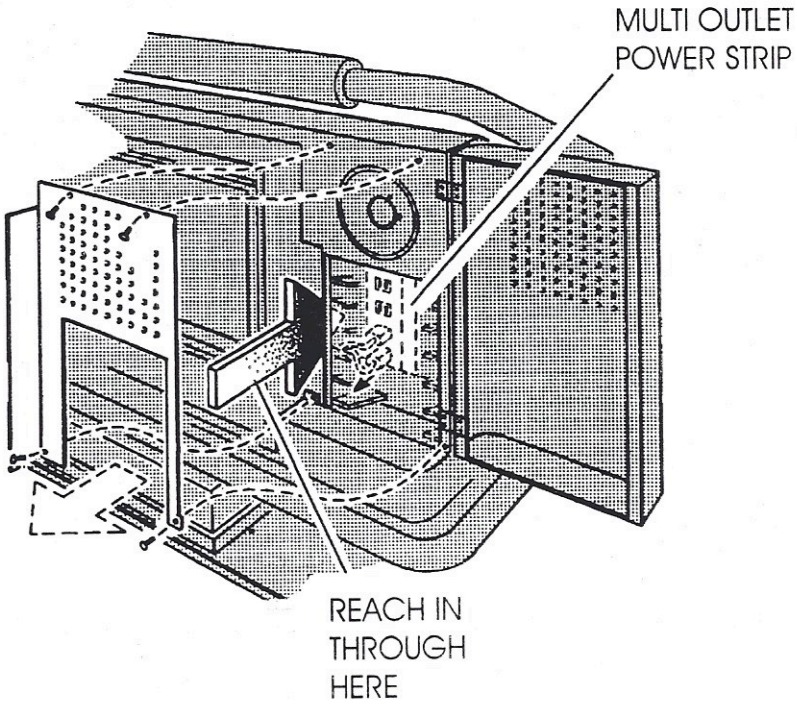
METAL SHELF MUST BE REAISED ON RIGHT SIDE TO ALLOW REMOVAL OF CONTROLLERS

13.

Open the left and right side speaker access doors. Remove the two screws holding the monitor cover. Remove cover. Set cover and screws aside.



14.



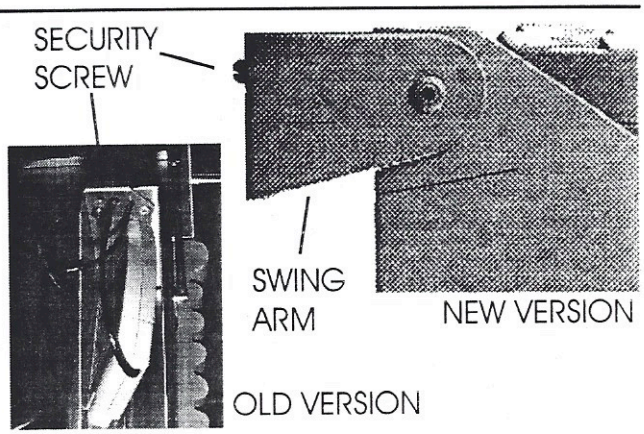
Remove 4 - screws holding the right side speaker access door. Set door and screws aside. Notice an opening just to the right of the monitor. This opening allows you access to the power strip. Place N64 A/C Power Supply into rear of metal shelf compartment. Feed its power cord and plug up along the back of the compartment, up to the power strip. Reach in between monitor and speaker and plug cord from power supply into multi outlet power strip. Replace speaker access door and monitor Replace audio and video cables on VCR (plug into Audio Out and Video Out.) Put VCR back on top of circuit board cover and replace the VCR security strap.

15.

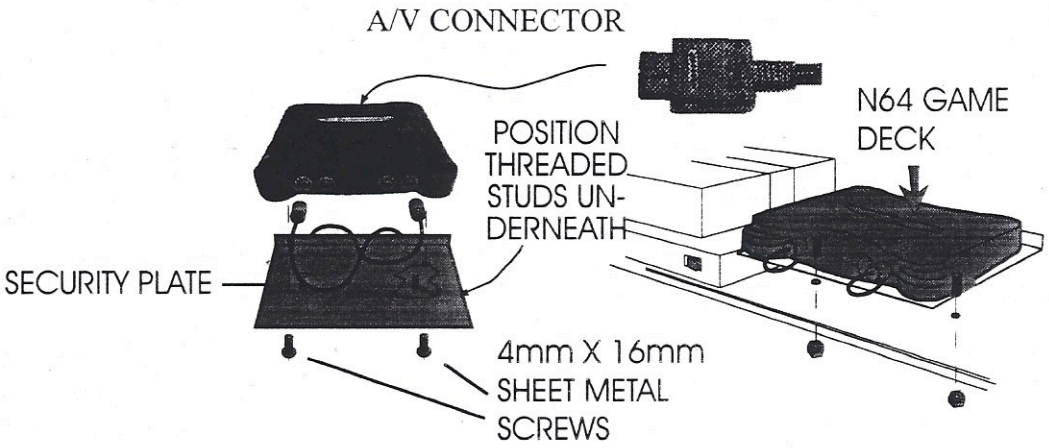
•Remove Security screw behind the Game Cartridge Holder shown at right. Swing up Security Swing Arm.

•Remove the existing game cartridges and replace with new N64 CARTRIDGES.

•Swing down the Security Swing Arm and replace the Security screw.



16.



Align N64 Game Deck over Security Plate. Plug controllers into the far left and right port in front of the Game Deck. Position controller cords between screws between screws before fastening screws. Fasten Game Deck to Security Plate with two 4mm x 16mm flat head sheet metal screws.

Plug the N64 A/C Power Supply into rear of N64 Game Deck.

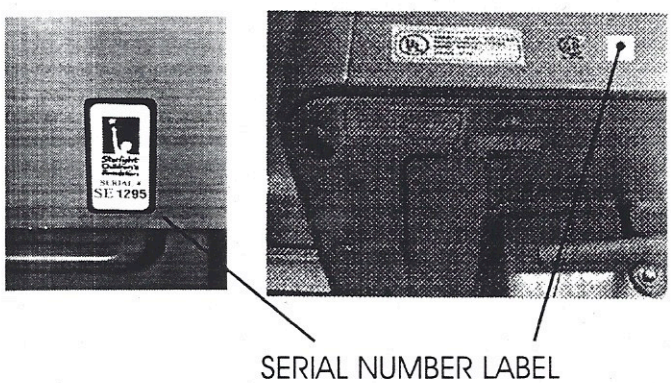
Plug Audio/Video connector (shown above) into rear of the N64 Game Deck.

Align N64 Security Plate with attached Game Deck over existing Security Strap holes, and set in place with two 1/4 - 20 nuts.

17.

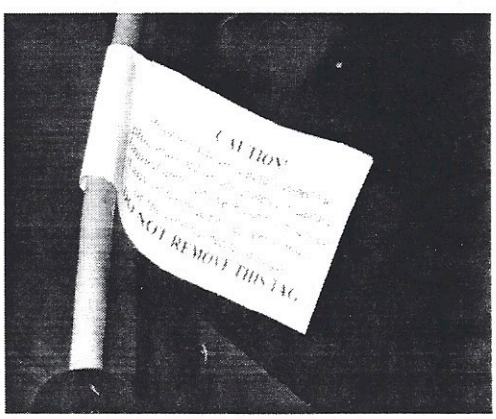
Peel off a Serial Number Label and apply to the Fun Center as shown at the right. Peel off the last Serial Number Label and apply it to the top right corner of your "sign off" sheet.

LEFT SIDE OF FUN CENTER



18.

Remove protective paper from adhesive on back of label. Wrap label around main (yellow) power cord as shown. This completes your Starlight Fun Center Enhancement and Upgrade operation.



STARLIGHT FUN CENTER
REPAIR MANUAL

StarLight Fun Center Repair Manual

TOOLS NEEDED 2
SAFETY INSTRUCTIONS 3
STARLIGHT FUN CENTER BREAKDOWN/REASSEMBLY INSTRUCTIONS 5
INITIAL PREPARATION 5
REMOVING THE GAME DECK: 5
REMOVING THE PC BOARD: 6
REMOVING VCR: 6
REMOVING THE VIDEO GAME CARTRIDGES: 7
REMOVING NINTENDO CONTROLLERS: 7
FUNCENTER REVISIONS/VARIATIONS 9
POWER SWITCH CONFIGURATIONS 9
TIP BUMPER CONFIGURATION 9
VIDEO GAME AUDIO CONFIGURATIONS 9
CONTROL DECK POWER SUPPLY CORDS 10
GAME PAK SECURITY CHAIN SYSTEMS 10
WIRING DIAGRAM 12
ELECTRICAL CONNECTIVITY 12
AUDIO/VIDEO CONNECTIVITY 13
EXPLODED VIEW 14
EXPLODED VIEW - TOP HOUSING UNIT 14
EXPLODED VIEW - BASE UNIT 15
PARTS 16
NINTENDO FUN CENTER PARTS LIST 16
STARLIGHT FUN CENTER PARTS LIST 16
TROUBLESHOOTING FLOWCHARTS 18
MONITOR FEATURES 22
INSTANT-ON FEATURE 22
KEYBOARD LOCK FEATURE 22
GLOSSARY 23

STARLIGHT FOUNDATION NINTENDO FUN CENTER

TOOLS NEEDED

VICE GRIPS (FLAT, 3/8" WIDE JAWS)
PHILLIPS SCREW DRIVER (STUBBY) #2
SOCKET WRENCH WITH 1/4" AND 11/32" SOCKETS or BOX -ENDWRENCH/ 6"
ADJUSTABLE WRENCH
NUT DRIVER
ALLEN WRENCH (1/8")
FLASHLIGHT

SAFETY INSTRUCTIONS

Read Instructions - All the safety and operating instructions should be read before operating the unit.

Retain Instructions - The safety and operating instructions should be retained for future reference.

Heed Warning - All warnings on the unit and in the operating instructions should be adhered to.

Follow Instructions - All operating and use instructions should be followed.

Cleaning - Unplug this video product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

Attachments - Do not use attachments not recommended by the manufacturer as they may cause hazards.

Water and Moisture - Do not use this video product near water - for example, near a bath tub, sink, on a wet floor.

Ventilation - Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the Nintendo Fun Center. They protect it from overheating, and these openings must not be blocked or covered.

Power Sources - This unit should be operated only from the type of power source indicated on the marking label.

Grounding Pin Warnings - This unit is equipped with a 3-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.

Power-Cord Protection - Power Supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

Lightning - For added protection for this unit during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the unit due to lightning and power-line surges.

Overloading - Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

Object and Liquid Entry - Never push objects of any kind into this unit through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the unit.

Damage Requiring Service - Unplug this unit from the wall outlet and refer servicing to qualified service personnel under the following conditions:

When the power-supply cord or plug is damaged.
If liquid has been spilled, or objects have fallen into the unit.
If the unit has been exposed to rain or water.
If the unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the unit to its normal operation.
If the unit has been dropped or the cabinet has been damaged.
When the unit exhibits a distinct change in performance - this indicates a need for service.

Replacement Parts - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

Safety Check - Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.

Moving the Fun Center - The unit should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the unit to overturn. The Fun Center should not be moved by children without proper guidance from an adult.

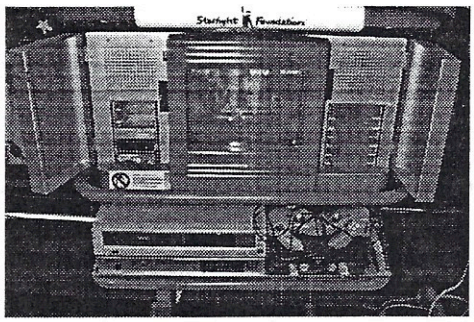
Repair and Maintenance - Fun Center Repair and Maintenance should be done by qualified service personnel only. If you are in need of assistance locating qualified service personnel, please contact Starlight Foundation International (800) 274-7827.

Humidity and Dust - Avoid places where there is high humidity or excessive dust, which may cause damage to internal parts. In order to prevent operational problems, dust should be cleaned from the Fun Center regularly.

Internal Cleaning of Fun Center Components - The VCR and Nintendo game system should be regularly cleaned with approved cleaning materials. If you are in need of a Nintendo cleaning kit and/or a VCR Head Cleaner, please contact the Fun Center Coordinator at Starlight International at (800) 274-7827.

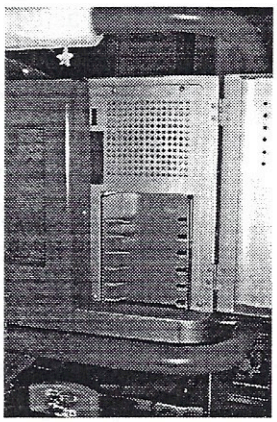
***WARNING*: TO AVOID THE HAZARDS OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR OTHER MOISTURE.**

STARLIGHT FUN CENTER BREAKDOWN/REASSEMBLY INSTRUCTIONS



INITIAL PREPARATION

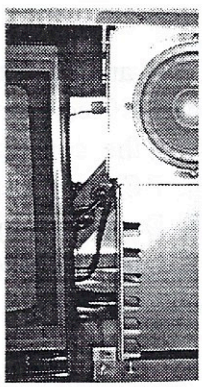
Unplug the main power cord from the outlet.



Roll the Starlight unit close to a table or other flat work surface.

Unlock the upper and lower locks on the left side of the main housing (ORIENTATION - FACING UNIT.) The purple hinged door below the monitor should drop open.

Open the left and right side speaker door (ORIENTATION - FACING UNIT.)

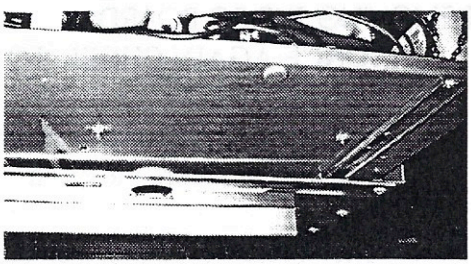


Remove (2) screws holding purple monitor cover in place (one on the left and one on the right side.)

Remove plastic monitor cover and set aside.

Remove four (4) screws holding right speaker cover in place (remove right speaker cover only.)

Using a Flashlight, look to the right of the TV. You will see a power strip mounted diagonally. Locate the cord that is round and unplug it (VCR.)

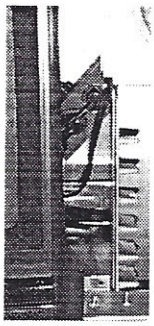


REMOVING THE GAME DECK:

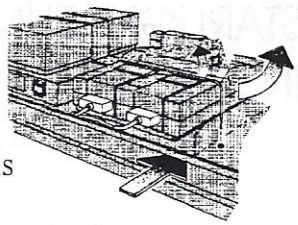
Slide drawer out toward you.

Unplug the cable connector from the back of the game deck (remove AC cable if SNS).

From below the drawer, remove the nut(s) that secures the gamedeck security wire/plate in place.



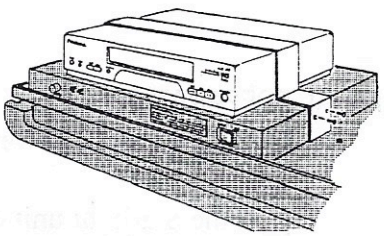
Swivel the security wire (if the Super NES type) so the left "hook" end is vertical and can be removed from the hole in the drawer.



Remove the AC plug from the power strip if the game deck is an N64.

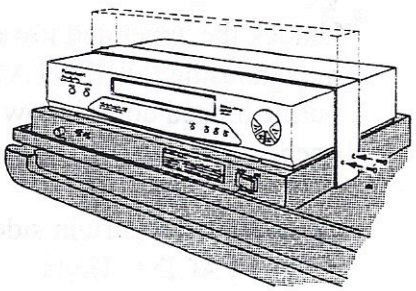
Lift the game deck up 1" to allow mounting studs to clear and remove it.

REMOVING VCR:

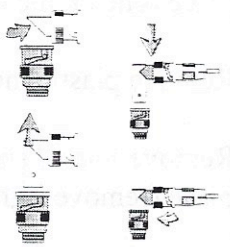


Using the Phillips screwdriver, remove (4) screws and flat washers from VCR strap (there are two on either side) and set aside.

Slide the VCR strap toward you, and off the VCR.



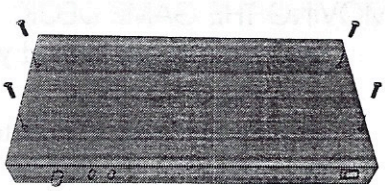
Reach to the underside, right rear of the monitor shelf (just above where the gamedeck used to be.) You will find an elastic band that suspends the VCR cord. From there, gently tug on the VCR cord, reaching to the right of the monitor if necessary to guide the plug and cord off the back of the monitor shelf, and out of the white elastic band.



Slide the VCR forward a few inches, reach around behind it and unplug the BNC connector from the "VIDEO OUT" by twisting the connector and then pulling it out. Then remove the RCA connector from the "AUDIO OUT". (**NOTE**: Depending upon which type of VCR is used in the FunCenter, the video connector may be either type of BNC connector shown at right or even an RCA connector.)

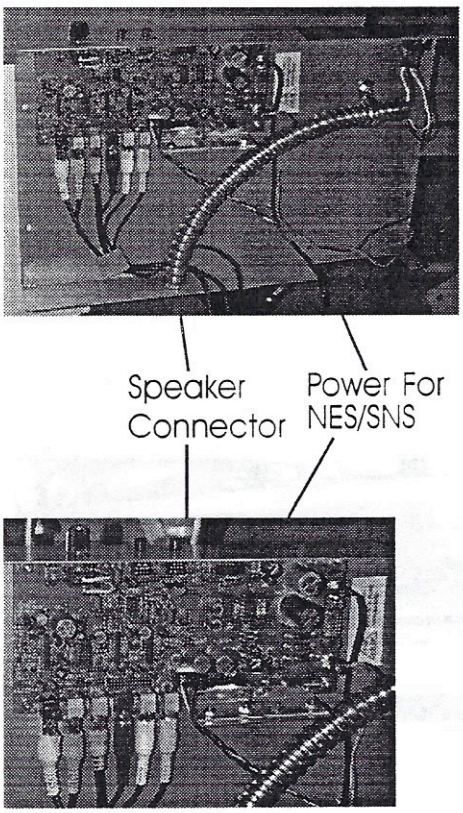
Now remove the VCR completely and set it aside.

REMOVING THE PC BOARD:



(ONCE AGAIN CHECK TO SEE THAT THE UNIT IS UNPLUGGED.)
Using the Phillips screwdriver, remove the four (4) outer screws that secure the electronic box in place.

The volume knob may be held in place with hot glue or a set screw. It can be removed with a little work - twisting it to the left and pulling it off if it is held on with the hot glue. Otherwise, it should be held on with a set screw. Remove the screw and slid the knob off the shaft.



Once the volume knob is removed, tilt the front end of the electronic box "up".

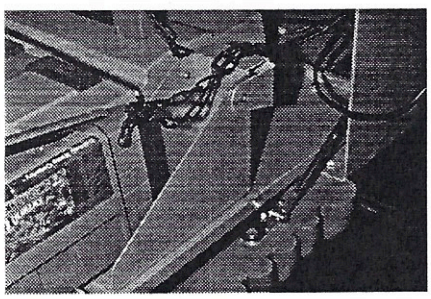
Disconnect all five (5) of the RCA plugs from the board, be aware that there may be hot glue holding them in position (refer to the wiring diagrams for the correct order of cable replacement.) CAUTION: **hold the RCA jack on the circuit board before pulling on the cables**. Near the fuse, unplug the AC adapter power cable and the gamedeck power cable.

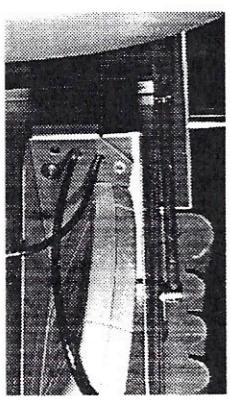
Find the four-wire connector with black, white and red wires (speaker wires) and disconnect it.

All of the cable connections to the board should now be removed. Make sure that the wires connected to the power switch remain undisturbed.

There are four (4) screws with plastic spacers and nuts securing the corners of the PC board. Remove them and keep them with the board.

You will see that two (2) screws hold the PC board's heat sink bracket in place. Remove these two (2) screws and nuts.





REMOVING THE VIDEO GAME CARTRIDGES:

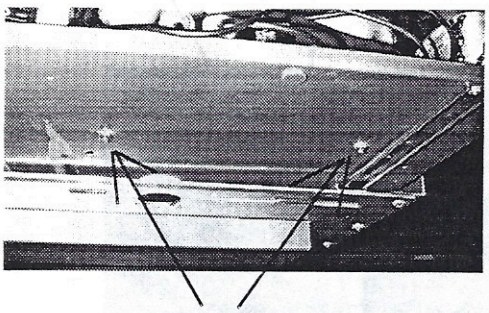
Use an Allen wrench (1/8" on old version, 3/32" on new version) to remove the Allen head screw from behind the two (2) cartridge storage slots. On the newer version, the allen head screw is removed from the back, on the older version, it is accessed from the front. This will allow the trap door to pivot . The wire security cables/chains are now freed from the trap door and the game cartridges can be removed.

REMOVING NINTENDO CONTROLLERS:

Pull the controllers out of the controller cradle underneath the upper FunCenter housing if dealing with a Super NES unit. Cut the controller cable just below where it comes out of the main housing. Remove the strain relief groumet with a pair of needle-nose pliars by pulling it out from below the main housing and then remove the controllers. (Also remove the four screws, two on each side, that hold the controller cradle to the main housing; set the cradle and screws aside.)

Slide drawer out towards you until it stops.

Locate the two (2) nuts that hold the N64 control deck in place and remove them. Lift the control deck up and pull the controller cords through to the front.



Unplug the controllers from the front of the N64 control deck (slots 1 &/or 4).

The controllers are now free to be removed from the unit and replaced.

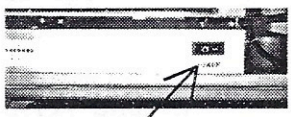
FUNCENTER REVISIONS/VARIATIONS

POWER SWITCH CONFIGURATIONS

There are three variations in how power was routed into the FunCenter. The diffeent variations can be distinguished by checking the color and location of the power switch.

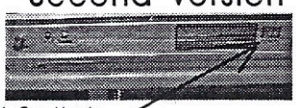
First Version - the power switch will be located on the silver box below the VCR, it will be black, and have only two wires connecting to the switch inside the silver box.

First Version



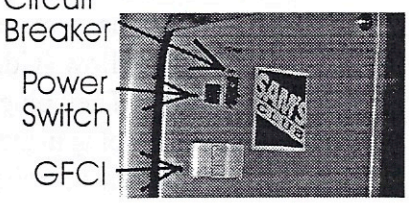
Second Version - the power switch will be located on the silver box below the VCR, it will be red, and it will have four wires connecting to the switch inside the silver box.

Second Version



Third Version - the power switch will be located on the outside of the upper main housing. Their will be a GFCI breaker immediately below the power switch along with a regular circuit breaker.

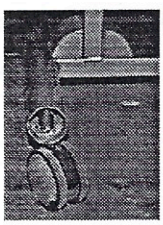
Third Version



TIP BUMPER CONFIGURATION

There are three different tip bumper configurations on the FunCenter.

First Version - the bottom bracket the wheels mounted to had open ends with the tube cut off immediately after the caster attachment.



First Version

Second Version - the bottom bracket has tubular attachments added to each of the ends of the "H" shaped bracket. Each attachment extends straight out a couple inches and then angles down at about 40 degrees for a couple of inches with a plastic cap on the end. It is attached to the main "H" shaped bracket with screws, one on each side of the tube.

Second Version

Third Version - the bottom "H" shaped bracket is modified so that there is a curved bend downward at each tube end with a plastic end cap to cover the tube opening.

Third Version

VIDEO GAME AUDIO CONFIGURATIONS

There are three different audio connection configurations to the main circuit board from the video game systems.

First Version - the NES control deck only used a mono audio output, so there is only one audio connection to the main circuit board. In this configuration, the yellow (video) plug would go into the RCA jack closest to the heat sinks on the circuit board and the red (audio) plug would go into the third RCA jack to the left of the heat sinks with an open RCA jack these two connections.

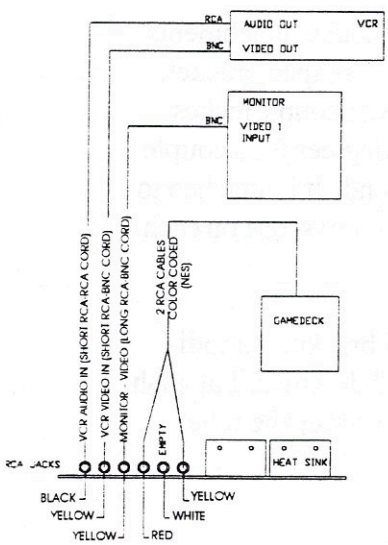
Second Version - for NES to Super NES conversions, a multiout cable with a mono audio output was provided to allow the use of the existing A/V cable from the origional NES installation. By using barrel adapters (connectors with female attachments at each end), the special mono output cables for the Super NES could plug directly into the A/V cable used with the NES, thus it became unnessesary to open the silver box to do make this change. This is the least common version of audio hook-up used.

Third Version - the Super NES and N64 control decks both use the same multi-out cable, which has a stereo audio output. Therefore the miltiout plug from the back has cables with yellow (video), red (audio right), and white (audio left) RCA plugs attached to them. They plug into the three RCA jacks on the main circuit board starting with the yellow plug in the RCA jack closest to the heat sinks, the white plug in the next RCA jack to the left and the red plug in the third jack to the left.

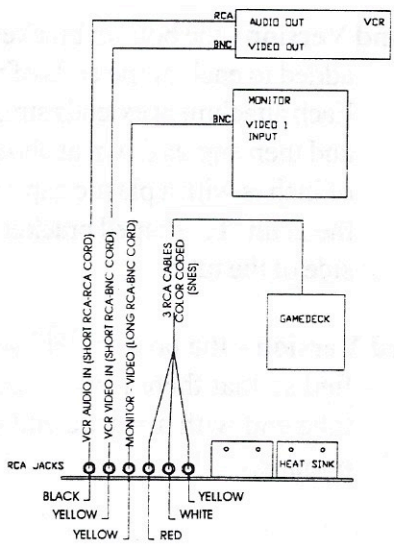
CONTROL DECK POWER SUPPLY CORDS

Power was supplied to the different types of video game sytems (NES, SNS, N64) in different

First Version



Third Version



ways.

First Version - the NES and Super NES both draw their power from a cable the plugs into the main circuit board.

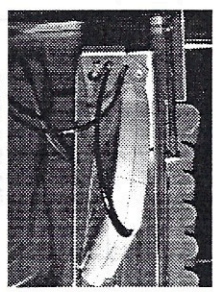
Second Version - for upgrades from NES to Super NES a custom made cable was provided the had an NES receptecle on one end and a Super NES plug on the other. This allowed the Super NES to use the old NES power cord to draw power from without having to open the silver box to plug in a whole new cable. This is the least common version used.

Third Version - the N64 power supply plugs directly into the back of the game system with cord that plugs into the power strip behind the monitor in the upper main housing.

GAME PAK SECURITY CHAIN SYSTEMS

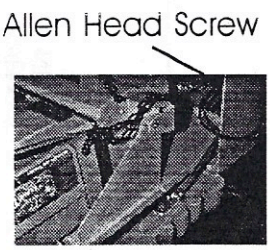
There are two different methods of attaching the video games to the FunCenter.

First Version - the game paks have rubber-coated braided steel cables that fit through vertical slots in the back of the game pak holder. A metal bracket was held in place over the slots with an allen head screw (uses 1/8" Allen wrench), accessable from the front of the unit at the back of the game pak storage slots. When the screw is removed, the bracket will pivot up and to the right, allowing the cables to be lifted up through the top of the slots and the game pak could then be removed.



First Version

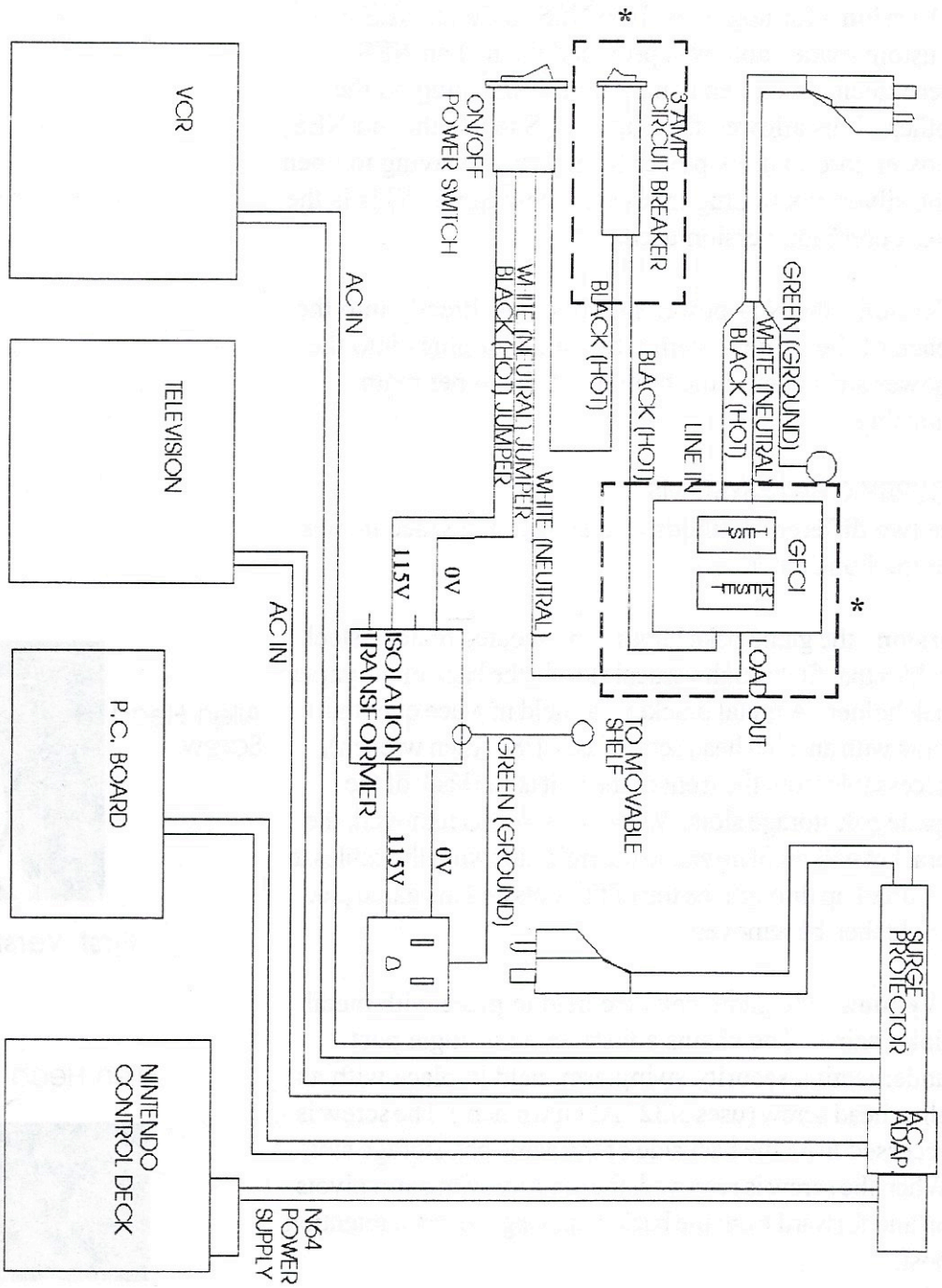
Second Version - the game paks are held in place with metal link chains. The chains a fastened to a single post underneath a security swing arm, held in place with an allen head screw (uses 3/32" Allen wrench.) The screw is accessed from the backside of the game pak storage slots. When the screw is removed, the security swing arm pivots up and forward from the back, exposing the chain retention post.



Second Version

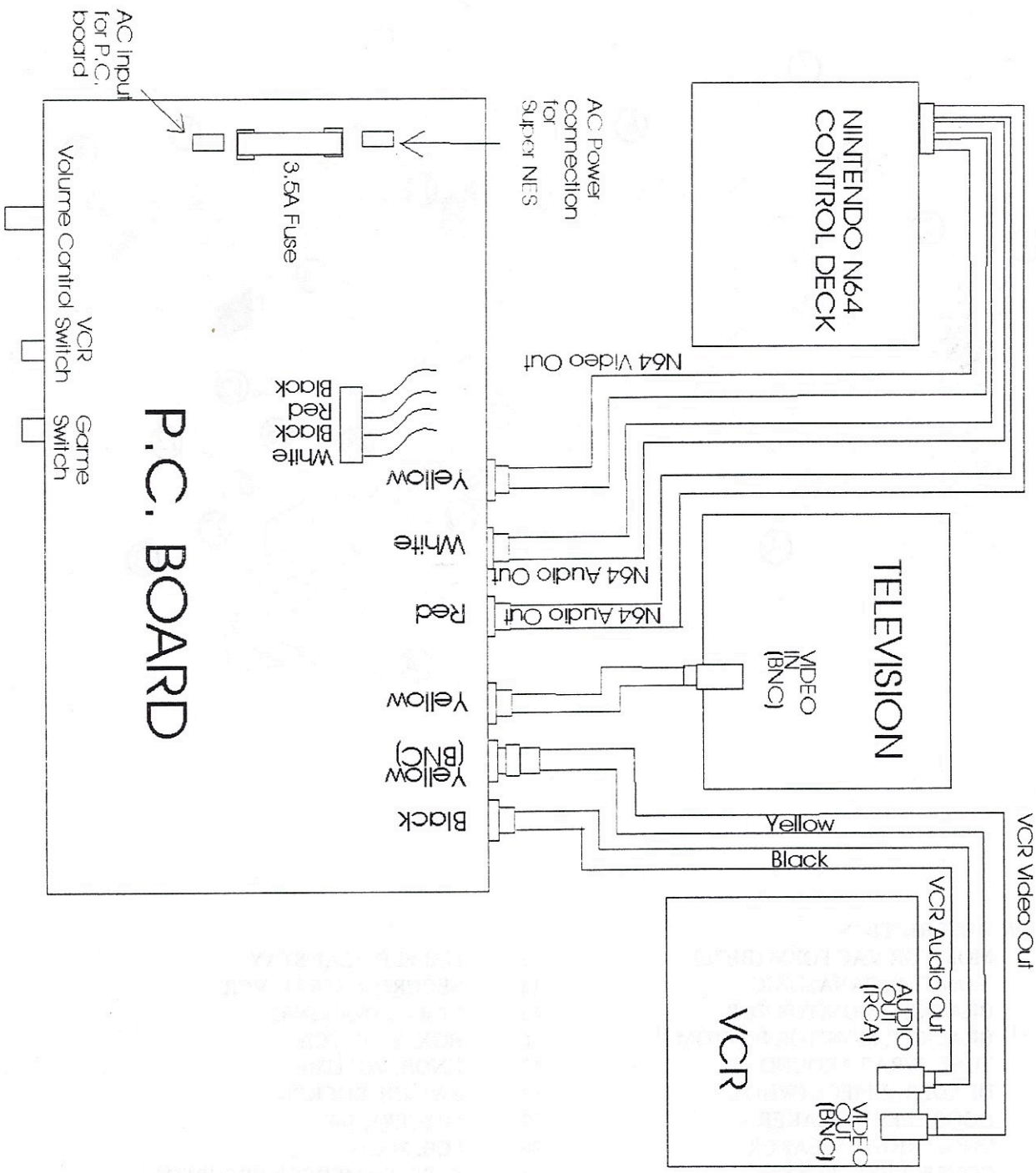
WIRING DIAGRAM

ELECTRICAL CONNECTIVITY



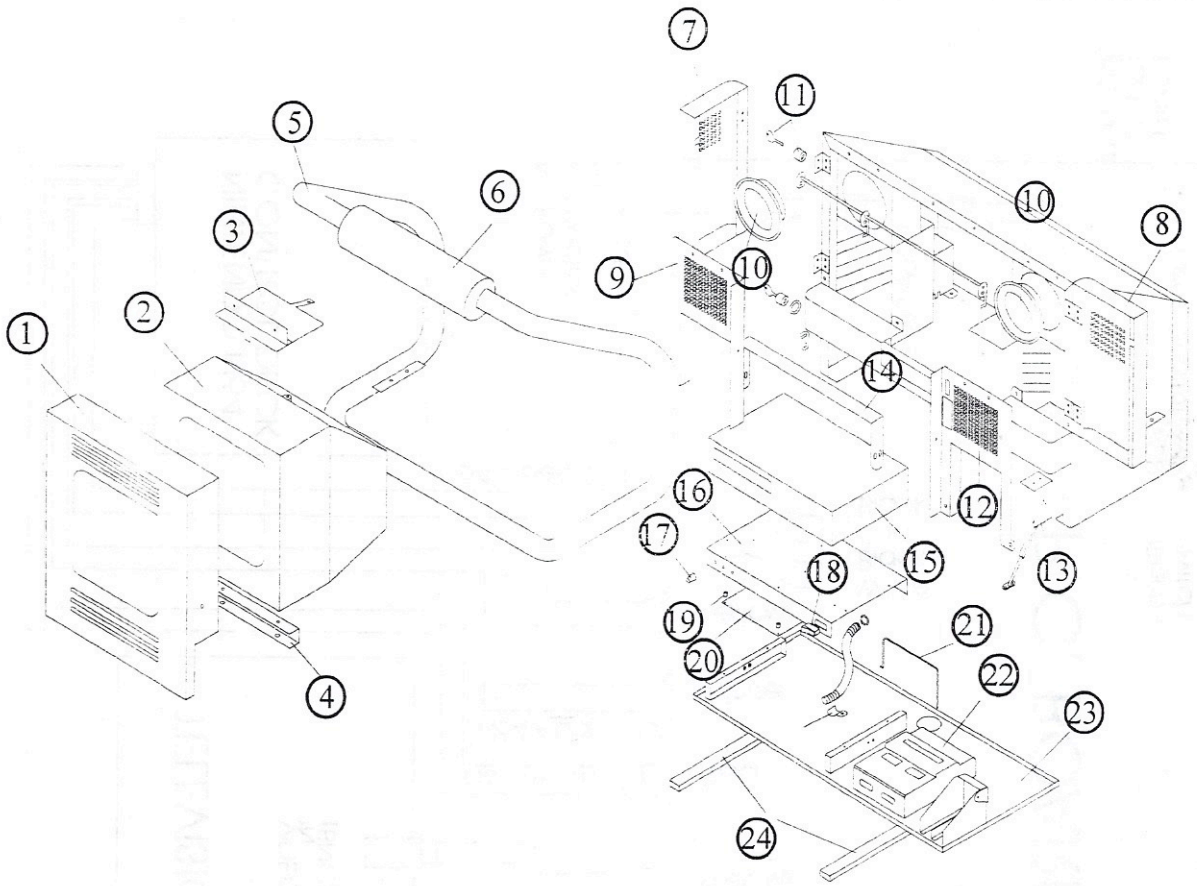
*** These items are only found on the third version and later production models of the Fun Center.**

AUDIO/VIDEO CONNECTIVITY



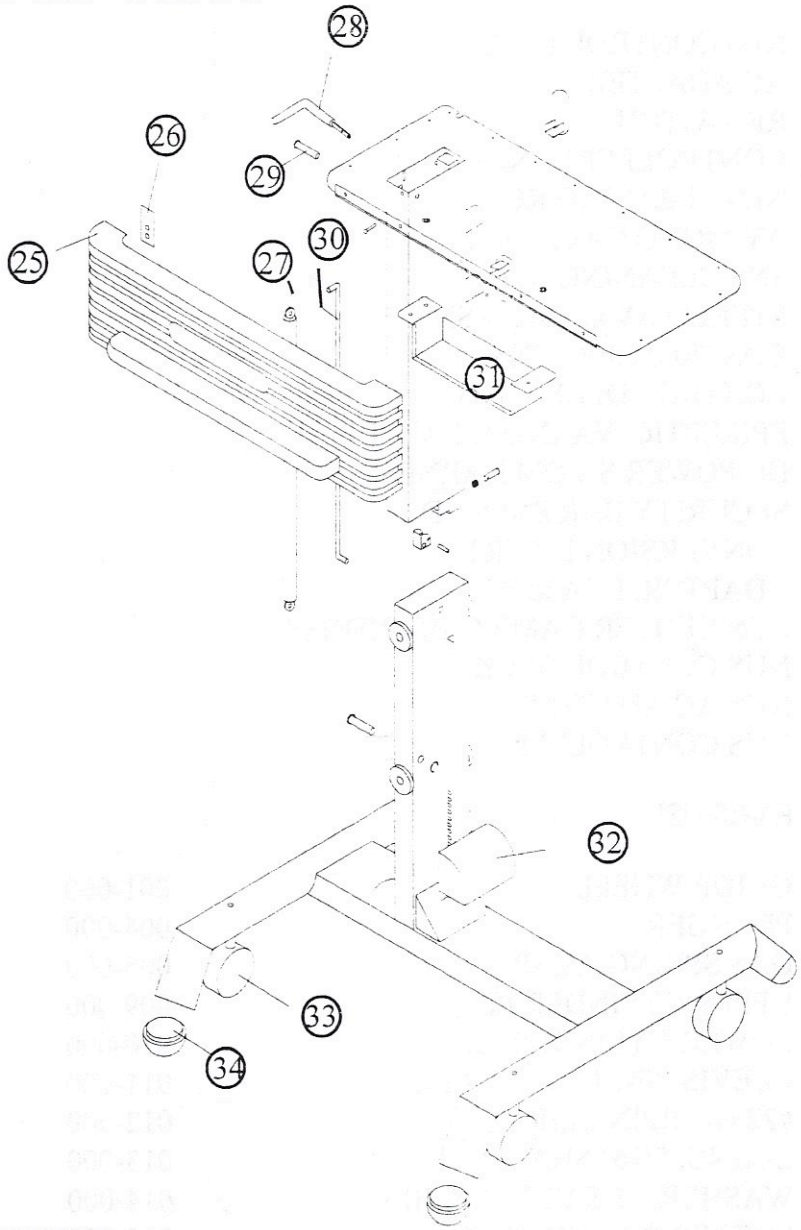
EXPLODED VIEW

EXPLODED VIEW - TOP HOUSING UNIT



ITEM#	DESCRIPTION
1	MONITOR VAC FORM (BEZEL)
2	MONITOR, PANASONIC
3	BRACKET, MONITOR TOP
4	BRACKET, MONITOR BOTTOM
5	TUBE, WRAP AROUND
6	HEADER, 2-PIECE (WHITE)
7	DOOR, LEFT SPEAKER
8	DOOR, RIGHT SPEAKER
9	COVER, LEFT SPEAKER
10	5" ROUND SPEAKER
11	7/16" BARRELL LOCK
12	COVER, RIGHT SPEAKER
13	HAFELE, FLAP STAY
14	SECURITY STRAP, VCR
15	VCR - PANASONIC
16	BOX, MAIN PCB
17	KNOB, VOLUME
18	SWITCH, ROCKER
19	SPACERS, 1/4"
20	PCB, MAIN
21	WIRE, GAMEDECK SECURITY
22	CONTROL DECK, SUPER NES
23	DRAWER
24	DRAWER GLIDES

EXPLODED VIEW - BASE UNIT



ITEM # DESCRIPTION

25	LOWER DOOR (PURPLE)
26	PLATE, LOCK CATCH
27	GAS SPRING, SUSPA
28	LEVER, RELEASE
29	ROLL PIN, 1/8 X 3/4" LG. W/ E-RING, 5/16" SHAFT
30	ROD, RELEASE
31	BOX, CONTROLLER
32	GUSSET COVER (PURPLE)
33	CASTERS, 4"
34	END CAPS, STRUCTURAL FOAM

PARTS

NINTENDO FUN CENTER PARTS LIST

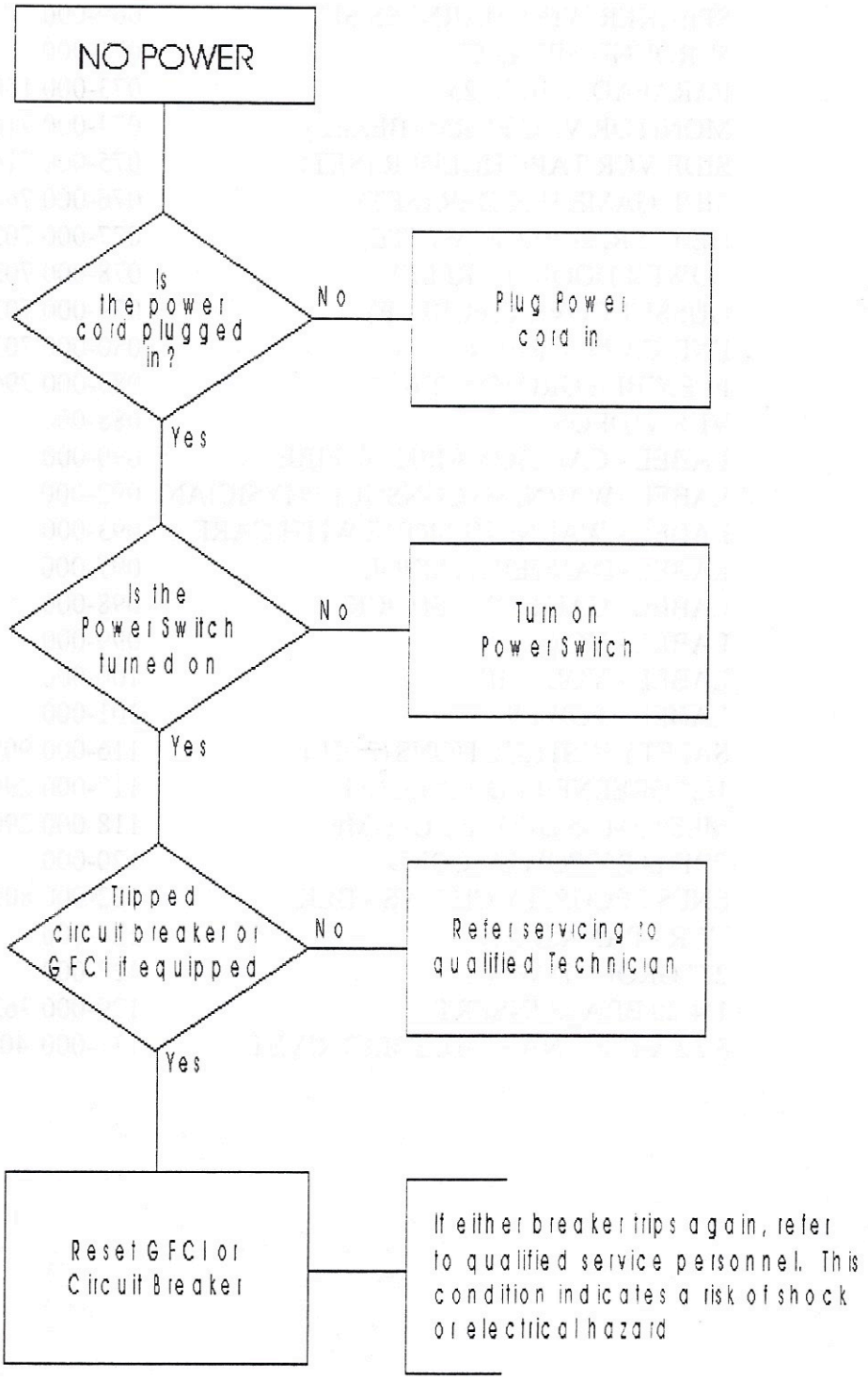
Item #	NOA P/N	Description	Qty.	Mfg Ref. #
	201	NES CONTROL DECK		
	202	AC ADAPTER		
	203	RF SWITCH		
	204	CONTROLLERS - NES		
	18052	NES CLEANING KIT		
	22424	AV MONO CABLE SFX		
	22681	SNS CLEANING KIT		
	23089	STEREO AV CABLE - SNS		
	23170	CONTROLLER - SNS		
	26886	CONTROL DECK - SNS		
	29097	EPILEPTIC WARNING LABEL		
	29374	DC POWER S-COM HARNESS		
	32594	SECURITY BAR SNES CD		
	33129	CONVERSION INSERT		
	33130	ADAPTER, RCA to RCA		
	33131	FUN CENTER GAME CARTRIDGES		
	34299	NUS CONTROL DECK		
	34301	NUS AC ADAPTER		
	34303	NUS CONTROLLER		

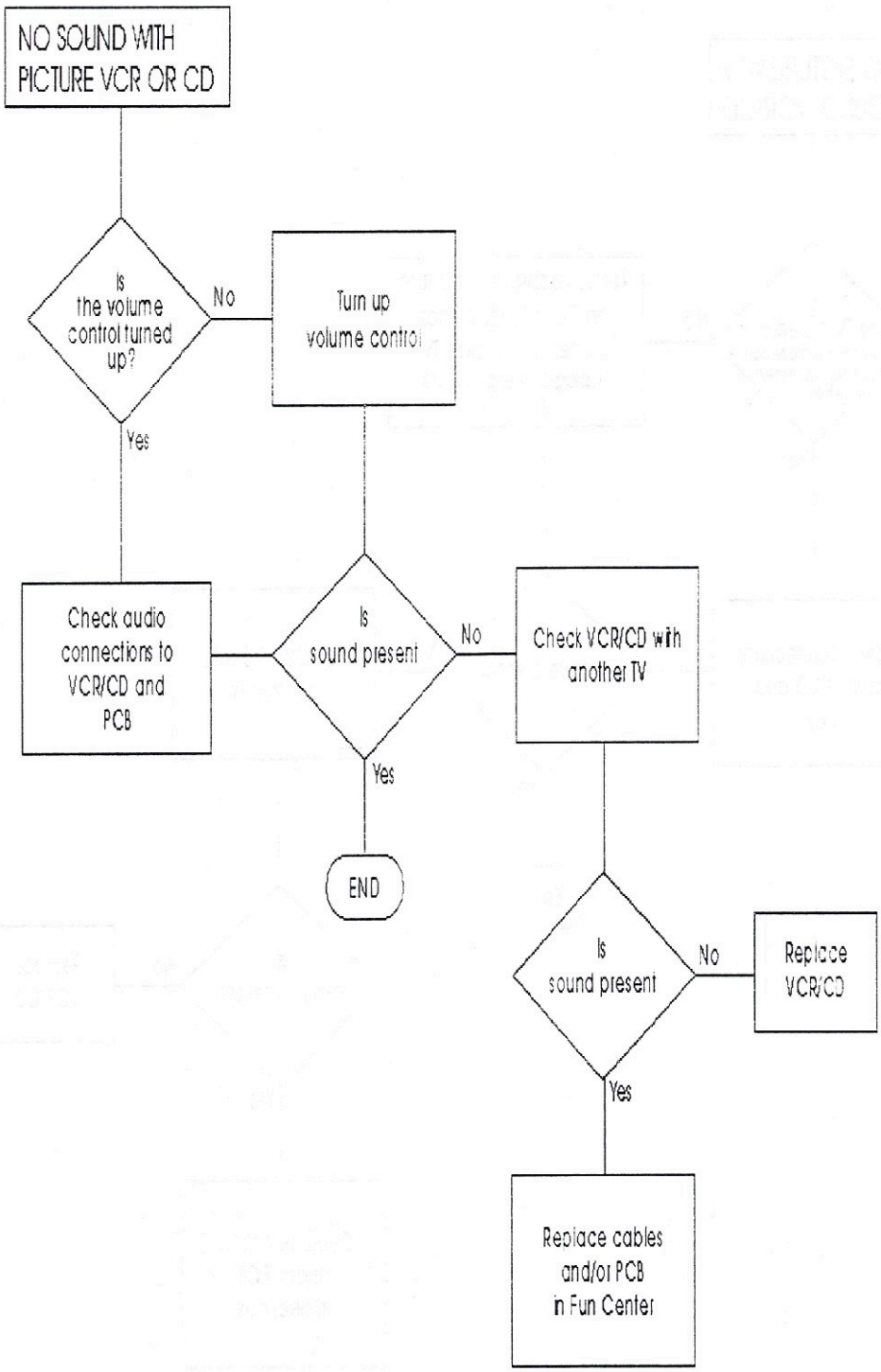
STARLIGHT FUN CENTER PARTS LIST

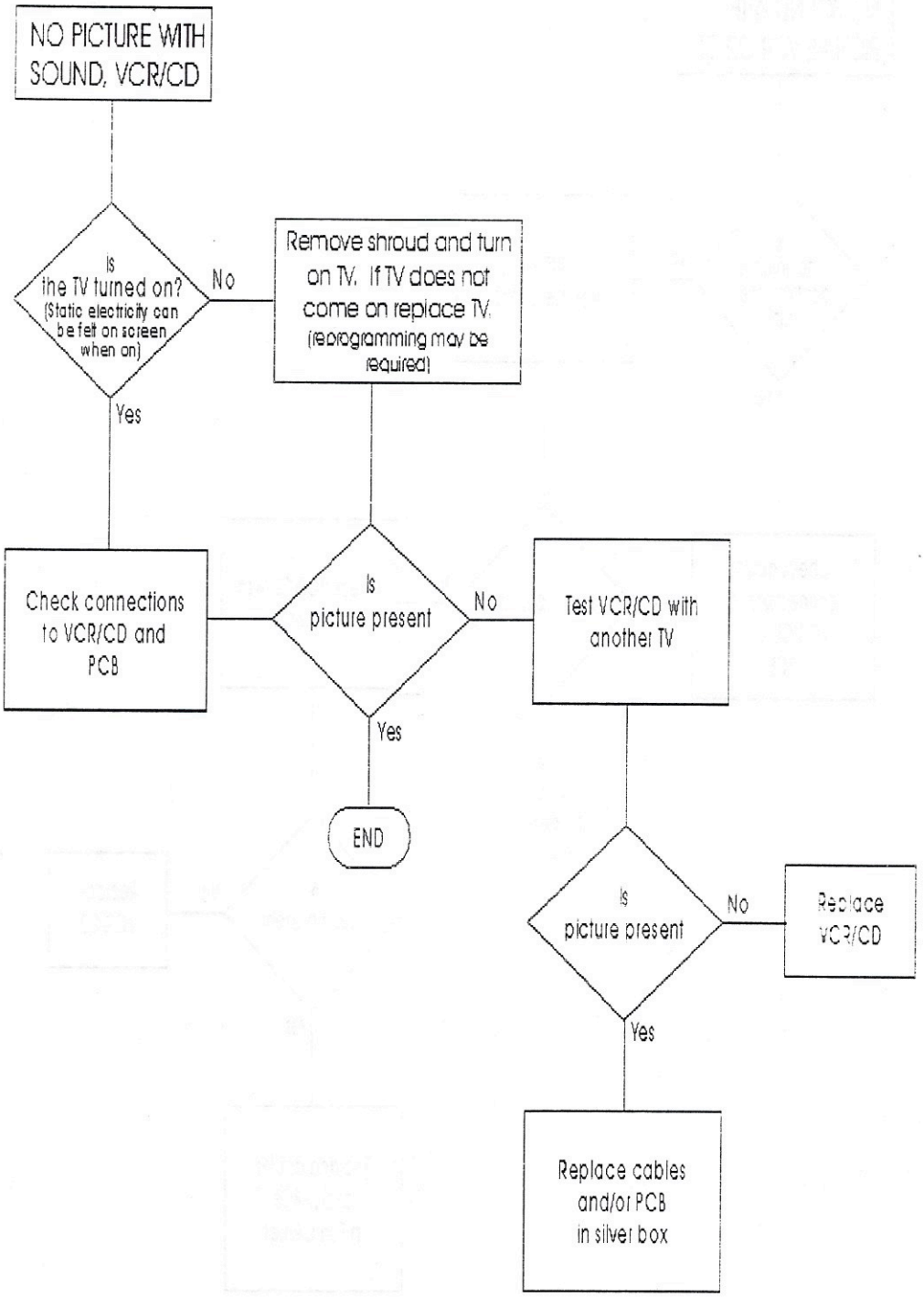
GUIDE WHEEL	001-000	
PLUNGER	004-000	
GAS SPRING, SUSPA	005-000	
UPPER CYLINDER PIN	009-000	
LOWER CYLINDER PIN	010-000	
CLEVIS PIN, 1/4 X 2 1/4 LG	011-000	
#22 HAIRPIN CLIP	012-000	
E-RING, 5/16" SHAFT	013-000	
WASHER, #8 SAE 3/16 X 7/16	014-000	
COTTER PIN, 1/16 X 1/2	015-000	
SPRING, OSHKOSH COIL	016-000	
CASTER, PLASTIC - GUIDE	017-000	
ROLL PIN, 1/8 X 3/4" LG.	018-000	
DRAWER GLIDES	024-000	210-1029-113
7/16" BARRELL LOCK	025-000	856-3038
3/32 SPACER COLLAR	026-000	856-094
1 1/2" BUTT HINGE	028-000	210-15150308
HAFELE, FLAP STAY	029-000	210-372-17-708
RUBBER GROMMET	030-000	160-500

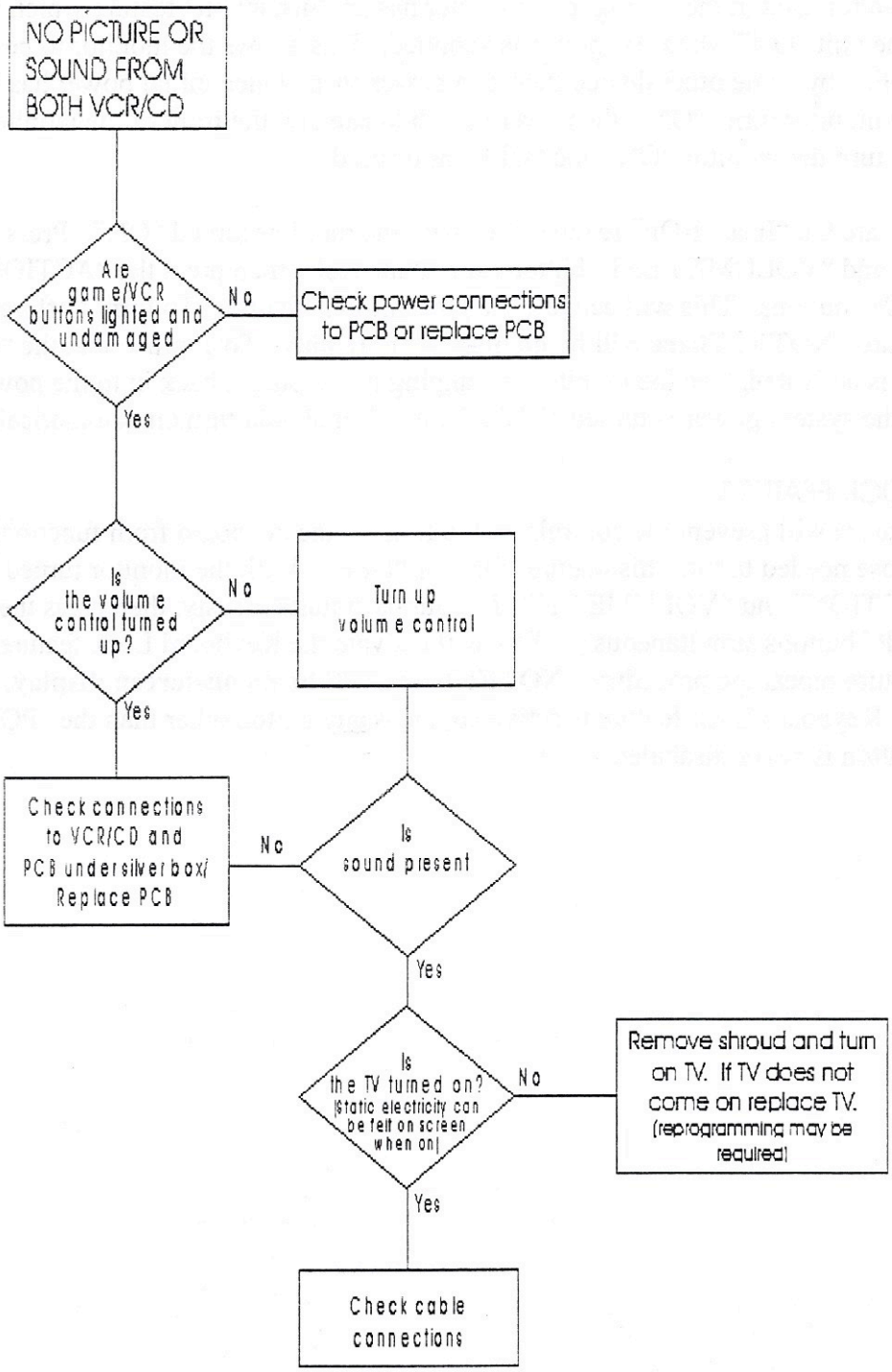
ISOLATION TRANSFORMER	066-000	
POWER STRIP	067-000	
AC ADAPTER, 50" LONG	068-000	
SPEAKER WIRE HARNESS SET	069-000	
5" ROUND SPEAKER	071-000	
PARAPAD, 1/16 X .25	073-000	150-180-0802
MONITOR VAC FORM (BEZEL)	074-000	716-6498
SIDE VCR TAPE HOLDER (SET)	075-000	716-6454
SIDE GAME HOLDER (SET)	076-000	76-6455
HEADER, 2-PIECE (WHITE)	077-000	703-6444
LOWER DOOR (PURPLE)	078-000	703-6441
GUSSET COVER (PURPLE)	079-000	703-6443
END CAPS (GREEN)	080-000	703-6598
FLEXIBLE GROMMET 6.3"	080-000	290-2173
VHS VIDEOS	088-000	
LABEL - CAUTION RISK OF FIRE	090-000	
LABEL - WARNING CONSULT PHYSICIAN	092-000	
LABEL - WARNING MOVE WITH CARE	093-000	
LABEL - DANGER SYMBOL	097-000	
LABEL - CAUTION - SHOCK	098-000	
LABEL - VCR	099-000	
LABEL - VOLUME	100-000	
LABEL - POWER	101-000	
SAFETY INSTRUCTIONS (2 SH.)	116-000	901-3398
1/2" GREENFIELD 14" LONG	117-000	290-2340-GF
MEDIUM 45 DEGREE CLAMP	118-000	290-2340-FC
PRIMARY POWER CORD	120-000	
SNES SECURITY CHAINS - BLK.	122-000	805-8A
VCR - PANASONIC	124-000	
27" GROUND WIRE	127-000	
1/4-20 BRASS INSERT	129-000	362-1420-S-1
3/32 X 1" FL. NAIL HD. SOLID RIVET	131-000	405-0306-S-4

TROUBLESHOOTING FLOWCHARTS


NO POWER
Is the power cord plugged in?
No
Plug Power cord in
Yes
Is the Power Switch turned on
No
Turn on Power Switch
Yes
Tripped circuit breaker or GFCI if equipped
No
Refer servicing to qualified Technician
Yes
Reset GFCI or Circuit Breaker
If either breaker trips again, refer to qualified service personnel. This condition indicates a risk of shock or electrical hazard


NO SOUND WITH PICTURE VCR OR CD
Is the volume control turned up?
No
Turn up volume control
Yes
Check audio connections to VCR/CD and PCB
Is sound present
No
Check VCR/CD with another TV
Yes
END
Is sound present
No
Replace VCR/CD
Yes
Replace cables and/or PCB in Fun Center


NO PICTURE WITH SOUND, VCR/CD
Is the TV turned on? (Static electricity can be felt on screen when on)
No
Remove shroud and turn on TV. If TV does not come on replace TV. (reprogramming may be required)
Yes
Check connections to VCR/CD and PCB
Is picture present
No
Test VCR/CD with another TV
Yes
END
Is picture present
No
Replace VCR/CD
Yes
Replace cables and/or PCB in silver box


NO PICTURE OR SOUND FROM BOTH VCR/CD
Are game/VCR buttons lighted and undamaged
No
Check power connections to PCB or replace PCB
Yes
Is the volume control turned up?
No
Turn up volume control
Yes
Check connections to VCR/CD and PCB under silver box/ Replace PCB
No
Is sound present
Yes
Is the TV turned on? (static electricity can be felt on screen when on)
No
Remove shroud and turn on TV. If TV does not come on replace TV. (reprogramming may be required)
Yes
Check cable connections

MONITOR FEATURES

INSTANT-ON FEATURE

The monitor used in the Starlight Fun Center has an "Instant on" feature which automatically turns the unit "ON" when AC power is supplied. This allows the monitor to be turned "ON" and "OFF" by some other device such as a power strip. Once initial power has been supplied and the monitor turns "ON", the power switch located on the front of the monitor may be used to turn the monitor "ON" and "OFF" as desired.

To activate the "Instant-On" feature, start with the monitor turned "ON". Press the "ACTION" and "VOLUME LEFT" buttons simultaneously, then press the "ACTION" and "DOWN" buttons. This will activate the "Instant-On" feature. To turn it off, repeat the procedure. **NOTE: There will be no on-screen display**. To confirm that the "Instant-On" feature is activated, turn the monitor off, unplug it and plug it back in to the power source. When the system power is turned "ON", the monitor should turn on automatically.

KEYBOARD LOCK FEATURE

This feature will prevent the controls on the front of the keyboard from functioning, other than those needed to turn this feature "ON" or "OFF". With the monitor turned "ON", press the "ACTION" and "VOLUME RIGHT" buttons simultaneously, then press the "ACTION" and "UP" buttons simultaneously. This will activate the Keyboard Lock feature. To deactive this feature repeat the procedure. **NOTE: There will be no on-screen display**. To confirm that the Keyboard Lock feature is activated, press any button other than the "POWER" button (this button is never disabaled.)

GLOSSARY

Amperage - a measurement of the rate of flow or transfer of electrical current.

Audio - the auditory elements of a television, or video game signal. Transmitted sounds from a game to speakers as a signal, carried within audio cable(s) (red or red & white), or an RF switch.

Circuit - an electrical system made up of a complete closed path allowing current flow from a source, through a conductor to one or more electrical devices and back again.

Circuit breaker - a device used to interupt, or "break", the flow of electricity to an electrical circuit. It is used to protect electrical circuitry from being damaged by too much current.

Controller - the component used by a video game player to direct the action(s) of a piece or character in a video game by pushing buttons, moving a joystick, pulling a trigger, or moving a directional pad.

Current - the movement of electrons through a conductor, measured in amperes

GFCI breaker - a Ground Fault Circuit Interupt breaker, a special type of circuit breaker that interupts the flow of electricity to a circuit when it "senses", through its internal circuitry, an electrical short to ground, or a "Ground Fault".

Isolation Transformer - a set of electrical coils or windings used to pass electrical currect from one to the other through the use of the magnetic field generated by the coil connected to the electrical source.

Open Circuit - A circuit which does not provide a complete path for the flow of current.

Power - in electricity, it is the amount of electricity transfered, in amps, times the electrical force , in volts. It is a measurement of a circuits ability to do work over a given time frame.

Resistance - the ability of a circuit to impede current flow, measured in ohms. Its value can be determined by a formula refered to as "Ohm's Law": **R** (resistance)=**E** (voltage)/**I** (current)

Short Circuit - an abnormal condition of very low resistance in a circuit that results in high current when voltage is applied, often damaging electrical components connected to the circuit.

Video - the visual elements of a television, or video game, signal. Transmitted from the game to the television through either the RF switch, or the video side (yellow) of the A/V cable.

Voltage - the potential difference, electrical pressure, or force, of electricity in a circuit.

Wattage - this is the unit measurement of power.